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ABSTRACT

The results of the pilot implementation of an evaluation methodology developed to assess the impact of introducing handicapped students into allied health curricula are discussed. An evaluative method that suggests anticipatory interventions was developed and used to measure the impact of visually impaired students enrolled in allied health programs at St. Mary's Junior College in Minnesota. The impact assessment model was designed to anticipate and uncover those critical points at which the impact of these students would need to be monitored during the training. A critical points analysis model was developed to identify those features of the impacted programs that created unanticipated problems and opportunities for changes during the students' progression through the programs. The relationships among visually impaired students, teachers, peer tutors, the project director, and clinical supervisors were explored. Interviews and questionnaires were used to examine the differing expectations of these groups of individuals and to identify potential problem areas. The critical points analysis model and the evaluation methodology proved to be valuable techniques. (SC)

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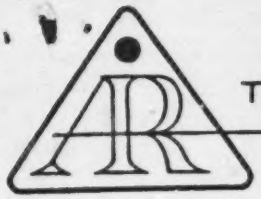

THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

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# Evaluating the Impact of Introducing Visually Impaired Students Into Allied Health Programs

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## Abstract

This paper discusses the results of the pilot implementation of an evaluation methodology developed to assess the impact of introducing physically handicapped students into allied health curricula. Recent federal legislation regarding handicapped persons assures that unique student populations will be seeking admission to educational programs in health fields. These students will place unforeseen demands on the educational systems they enter. An evaluative method that suggests anticipatory interventions was developed and used to measure the impact of visually impaired students on a college. This method also uncovered additional data sources that developed as the impact of these students spread throughout the college. The evaluative methodology developed should be useful to educators assessing the impact of new student groups.

## Introduction

Increasing numbers of older, re-entry and second-career students are being sought by institutions of higher education. With the passage of federal legislation, the possibility of these non-traditional students being admitted has increased. Legislation regarding handicapped persons assures that this unique student population will also be seeking admission to educational programs. These new and unique student populations will put unforeseen demands on the educational systems they enter. Institutions of higher education must develop efficient, cost effective mechanisms by which the impact of these new students can be monitored and potential problems can be anticipated. If such an assessment mechanism could be developed, it would help prevent a crisis management approach to the administration of innovative programs. The predictive, anticipatory nature of this kind of an assessment mechanism would differ from existing, retrospective evaluation models that are not predictive.

Like other educational institutions, St. Mary's Junior College is also experiencing the enrollment of new and unique student populations. One channel through which handicapped students have been admitted to St. Mary's is through a three-year Rehabilitation Services grant designed to recruit and train visually impaired students in allied health curricula. Given the innovative nature of this training project, college administrators recognized the potential value of using an impact assessment model that would anticipate and uncover those critical points at which the impact of these visually impaired students would need to be monitored as the project progressed. The following sections of this paper describe the development and preliminary implementation of an impact analysis model, the meth odology used to fully implement the model, implementation results, and a discussion of the useability of the

methodology for other educational institutions.

Model Development

Although the first year of the project's operation was almost over, and much information had already been lost, and evaluation consultant was hired to determine the feasibility of developing and implementing an impact analysis model. The consultants responsibilities included 1) the development of an institutional impact model to measure the impact of introducing visually impaired students into two allied health programs at St. Mary's; 2) the implementation of the model to produce a description of the impact of visually impaired students during the first year of the project; 3) identification of the critical points in the two programs-- the occupational and physical therapist assistant programs-- that would be important to monitor during the progress of the project; and 4) to design a system for the periodic monitoring of the impact of the project on the institution.

The consultant began by examining the environmental impact literature searching for possible strategies that could be used in attempting to predict future events. The existing strategies used to develop environmental impact analyses did not prove helpful. Taking a systems view of the college environment, the consultant developed and considered two general strategies for developing an impact analysis-- the Operations Impact Analysis model[1] and the Critical Points Analysis model. The first of these involves the charting of a temporal sequence of tasks that have been anticipated in the plan for the implementation of a project. This model was not considered appropriate since it only included anticipated tasks and too much information had been lost since the project had already been underway for almost one year. Instead, the Critical Points Analysis model was developed to identify those features of the impacted programs that created unanticipated problems

and opportunities for changes during the students' progression through the programs. Critical points were defined as those points in the existing institutional environment at which the visually impaired students are predicted to impact the system. The critical points of impact for the occupational and physical therapist assistant programs were outlined in the Critical Points Diagram (see Figure 1).

Insert Figure 1 about here

At each of these critical points of impact, the impacting social identity, that is, the visually impaired students, may interact with other social identities that are appropriate for the occasion. For example, at the critical point of Coursework-Lecture, a visually impaired student might interact with sighted students, other visually impaired students, and teachers. Among the social identities that are relevant at each critical point there exist expectations. An examination of the differences in expectations among the impacting social identities was intended to alert administrators to ongoing problem areas.

On order to discover all of the social identities with whom visually impaired students must and might establish relationships, a social impact network was diagrammed with visually impaired students at its center. The extent of possible relationships ranged from teachers and sighted students to the State Agency for the Blind. A social impact matrix was constructed to portray this relationship network. (see Figure 2).

Insert Figure 2 about here

The relationships among visually impaired students, teachers, peer tutors,

the Project Director and clinical supervisors were explored. The consultant conducted the preliminary study of the relationships among the first four social identities through the use of semi-structured interviews with selected informants. The interview data was analyzed according to the areas of agreement and conflict among the groups.[2] From this analysis, the critical points in the relationships were identified and were mapped onto the critical points diagram. This diagram then provided administrators with a basis for the ongoing monitoring of the project.

Model Implementation

Given the constraints of time and funding, the consultant was only able to complete the model development, preliminary implementation and identification of the critical points in the impacted programs. The design of a system for the periodic monitoring of the impact of the visually impaired students on the college was not yet complete. However, the consultant recommended that a formal survey instrument be constructed based on the preliminary data that had been collected.

During the 1978-79 academic year, the impact analysis model was fully implemented by the college's internal evaluator. Using the data about problem areas that had been previously collected, survey questionnaires were designed for visually impaired students, teachers and peer tutors. Each questionnaire included three parts: Part I included a variable number of items on a forced choice, agree-disagree scale; Part II asked respondents open-ended questions the helpfulness of college support services related to the visually impaired students; and Part III contained two vignettes. Vignettes are descriptions of situations in the college environment that involve the interaction among a number of social identities. The following is an example of a vignette used in the teachers questionnaire:

You ask the students in your class to pull their chairs into a circle for discussion. A visually impaired student ends up in the middle of the circle as discussion begins. It is obvious to you that the situation is awkward to everyone, but nobody is saying or doing anything. What would you do?

The consultant had developed and used vignettes as a technique to assess and discuss attitudes during the interviews that were conducted. Vignettes were included in the questionnaires so that the attitudes among the impacted social identities could continue to be explored.

To obtain a measure of the differences in expectations among the groups, parallel questionnaire items and vignettes were developed for each questionnaire.

Questionnaires and semi-structured interviews were used to collect information during each quarter of the academic year. Questionnaires were administered to all visually impaired students, their teachers and peer tutors. Teachers and tutors received questionnaires through the college mail system. Some of the partially sighted students in the project were able to read and answer the questionnaires without help but the totally blind students had the questionnaire read to them and typed their answers. Spring quarter all of the clinicians who had supervised the visually impaired students during the clinical components of their training programs were mailed questionnaires. These questionnaires contained only open ended questions. To assure a good return, the clinical coordinator for each program phoned each clinician prior to the mailing and also signed the cover letter that accompanied each questionnaire.

Implementation Outcomes

Both the evaluation methodology and the Critical Points Analysis model that were developed to measure the impact of visually impaired students on the college evolved as this training project unfolded. Following the fall quarter data

collection, the questionnaires and interview questions were revised each quarter using the data collected the previous quarter. In order to monitor the problems on which the items had been developed in the original questionnaires, all items were retained from one revision to the next. New items were added each revision. Since the results of the fall quarter data collection showed that some respondents were skipping some of the questionnaire items, the structure of the winter quarter questionnaire was changed to include a comments section opposite each questionnaire item. This change was made to reduce the respondents reaction to the forced choice scale and allow the respondent more options for response. This change did have an overwhelming effect. Respondents to these questionnaires filled them with subjective comments. Even though respondents chose a response on the forced choice scale they still included a comment. This pool of subjective information provided insight into the actual impact of the visually impaired students on the college as well as the social identities impacted. Perhaps attempting to quantify the impact of a new student group on a college environment cannot be done if an accurate picture of the environment is to be obtained.

Efforts to determine whether the information collected fall quarter was indeed representative of the reality of problems in the impacted college environment were undertaken in response to the fall quarter data analysis. The vignettes included in the questionnaires were not producing helpful, if any, information. Further investigation revealed that most of the situations depicted in the vignettes represented, what the evaluator hypothesized as Level I impact situations. These were situations of initial impact, rather like first impressions. The impacted identities within the college were no longer responding to these situations. They had become somewhat used to the presence and involvement of visually impaired students in their environment.

This outcome may demonstrate that vignettes are useful only in the initial interview and questionnaire development stages of implementing the Critical Points Analysis model and methodology.

Conclusions

The Critical Points Analysis model and the corresponding evaluation methodology described in this paper have proven to be valuable techniques in determining the impact of introducing visually impaired students into two of the allied health programs at St. Mary's Junior College. The use of this model would allow other educational institutions to monitor the impact of new student groups introduced into their college environments. The anticipatory nature of the model would allow administrators to identify the critical points of impact prior to the introduction of a new student group. The new student population could also be interviewed to determine their expectations before they enter the system. Given that the model also evolves as the impact of a new student group spreads throughout the college system, the model tailors itself to the institutional context in which it is bing implemented.

St. Mary's will graduate three visually impaired occupational and physical therapist assistants at the end of this academic year. However, several of the critical points on the Critical Points Diagram remain to be investigated. The evaluation methodology developed thus far will be continued to determine the impact of visually impaired therapist assistants at the remaining and perhaps as yet undiscovered critical points.

## Footnotes

[1]For a detailed description of the Operations Impact Model contact the authors.

[2]Interview analysis procedures may be obtained from the authors.

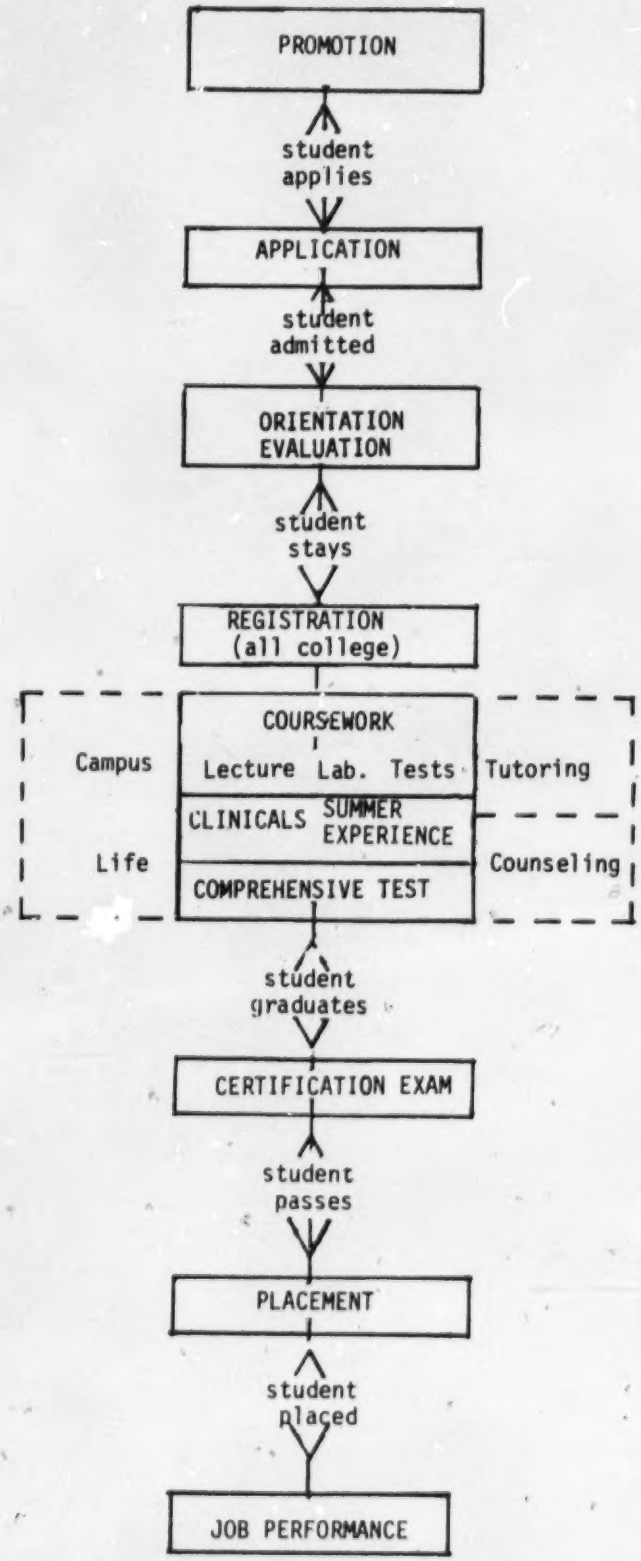


Figure 1. CRITICAL POINTS DIAGRAM. (From "Design and Implementation of an Institutional Impact Analysis" by William Stockton, Educational Development Office, St. Mary's Junior College, 1978.

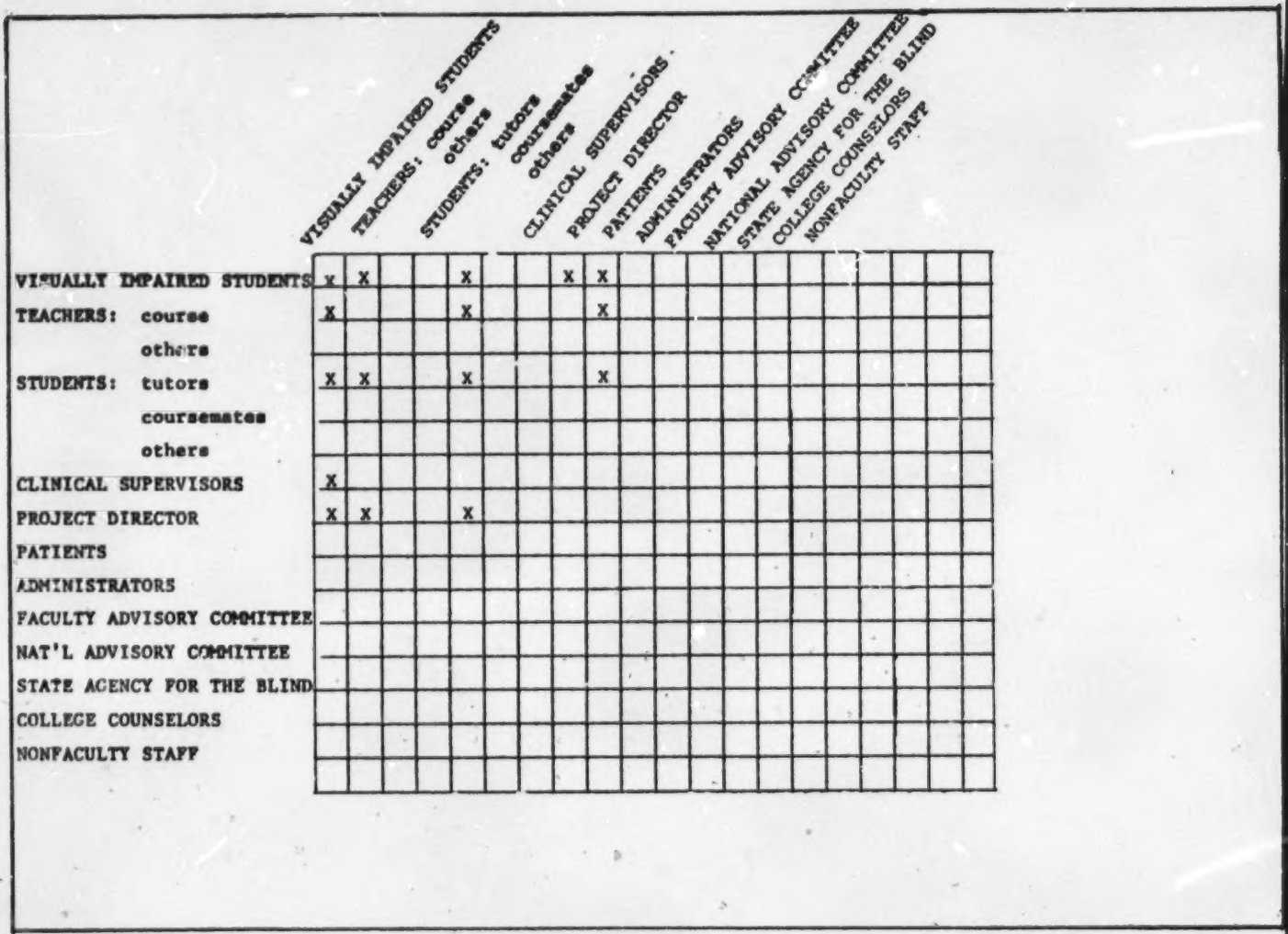


Figure 2. Social Impact Matrix. (From "Design and Implementation of an Institutional Impact Analysis" by William Stockton, St. Mary's Junior College, 1978.